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10/643,794

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Kanako Honda

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EXAMINER

KIM, CHONG R

ART UNIT

PAPER NUMBER

2624

DATE MAILED: 10/18/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/643,794

Applicant(s)

HONDA, KANAKO

Examiner

Charles Kim

Art Unit

2624

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☐ Responsive to communication(s) filed on ____.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) ____ is/are withdrawn from consideration.
- 5) ☒ Claim(s) 3-9, 11-19 is/are allowed.
- 6) ☒ Claim(s) 1, 2, 10 and 20 is/are rejected.
- 7) ☒ Claim(s) ____ is/are objected to.
- 8) ☐ Claim(s) ____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 19 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. ____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date 08/19/03.

- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. ____.
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: ____.

DETAILED ACTION

Specification

1. Applicant is reminded of the proper language and format for an abstract of the disclosure.

The abstract should be in narrative form and generally limited to a single paragraph on a separate sheet within the range of 50 to 150 words. It is important that the abstract not exceed 150 words in length since the space provided for the abstract on the computer tape used by the printer is limited. The form and legal phraseology often used in patent claims, such as "means" and "said," should be avoided. The abstract should describe the disclosure sufficiently to assist readers in deciding whether there is a need for consulting the full patent text for details.

The language should be clear and concise and should not repeat information given in the title. **It should avoid using phrases which can be implied, such as, "The disclosure concerns," "The disclosure defined by this invention," "The disclosure describes," etc.**

2. The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

Claim Objections

3. Claims 5, 6, 8, 15-16, 18 are objected to because of the following informalities: parenthesis in the claims are improper and thus should be removed. Appropriate correction is required.

The following quotations of 37 CFR § 1.75(a) is the basis of objection:

(a) The specification must conclude with a claim particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention or discovery.

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4. Claims 1-20 are objected to under 37 CFR § 1.75 (a) as failing to particularly point out and distinctly claim the subject matter which the applicant regards as his invention or discovery.

Referring to claim 1, the phrase “the field of view” in line 2 lacks antecedent basis.

Referring to claim 3, the phrase “the present” in line 3 lacks antecedent basis.

Referring to claim 3, the phrase “the total value” in line 4 lacks antecedent basis.

Referring to claim 3, the phrase “the last cycle” in line 5 lacks antecedent basis.

Referring to claim 6, the phrase “the last cycle” in line 4 lacks antecedent basis.

Referring to claim 6, the phrase “the present cycle” in line 5 lacks antecedent basis.

Similar objections apply to claims 11, 13, and 17. Appropriate corrections are required.

Claims not mentioned specifically are dependent from objected antecedent claims.

Claim Rejections - 35 USC § 112

The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

5. Claims 10 and 20 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claim(s) contains subject matter which was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Referring to claim 10, the phrase “wherein said camera is a monocular camera and said matrix segmentation is done by segmenting the field of view of said monocular camera based on

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the angle and on the range obtained from the upper and lower positions on a screen” is not supported by the applicant’s specification. Claim 10 is dependent on claim 1, which recites, “field of view of a stereo camera is segmented in the form of a matrix by angle and by measured range value based on parallax.” The applicant’s specification does not provide enabling support for a *stereo camera* that is also a *monocular camera*. Nor does the specification provide enabling support for segmenting the field of view based on parallax, as well as based on the upper and lower positions on a screen. Instead, the applicant’s specification suggests that either a stereo camera could be used, in which case the field of view is segmented based on parallax, or a monocular camera could be used, in which case the field of view is segmented based on the upper and lower positions on a screen (page 12, line 34-page 13, line 7). Thus, the applicant’s specification only provides enabling support for either a stereo camera or a monocular camera, but not a stereo camera that is also a monocular camera, as claim 10 recites. A similar rejection is applicable to claim 20.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

5. Claims 1 and 2 are rejected under 35 U.S.C. 102(b) as being anticipated by Shimomura, JP 2000329852A (“Shimomura”).

Referring to claim 1, Shimomura discloses a method for image processing, wherein the field of view of a stereo camera is segmented in the form of a matrix by angle and by measured range value based on parallax (pages 6-7, paragraph 35),

matrix data is calculated for a segment where a detected edge exists, and also for segments surrounding the segment, the calculated matrix data then being assigned to each of the segments (pages 6-7, paragraphs 35 and 39 and figure 5A),

a search is made through the assigned matrix data to find a segment that has matrix data exceeding a predetermined threshold value (figure 5B), and

if the detected edge exists in said found segment, edge data of said edge is taken to represent the position of an object (pages 6-7, paragraphs 35-37 and figure 5C).

Referring to claim 2, Shimomura further discloses that the matrix segmentation is done based on a prescribed angle and in accordance with measured range values for integer values of parallax (pages 6-7, paragraph 35).

Allowable Subject Matter

6. Claims 11-19 would be allowable if rewritten or amended to overcome the claim objects, set forth in this Office action.

7. Claims 3-9 would be allowable if rewritten to overcome the claim objections, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Kawabata U.S. Patent No. 6,370,262 discloses an objection detection method comprising the step of detecting edges in segments of a distance map.
- b. Nishigaki et al. U.S. Patent No. 6,987,864 discloses an object detection method that comprises segmenting a field of view of a stereo camera in the form of a matrix by angle and by measured range value based on parallax.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Charles Kim whose telephone number is 571-272-7421. The examiner can normally be reached on Mon thru Thurs 8:30am to 6pm and alternating Fri 9:30am to 6pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jingge Wu can be reached on 571-272-7429. The fax phone number for the organization where this application or proceeding is assigned is 571-272-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR

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system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


ck
October 11, 2006


JINGGE WU
PRIMARY EXAMINER